ATT7025/7027
Development Tool’s User Manual

Version	*Update*	*Remark*
V1.0	2008-01-17	First draft
V2.0	2008-01-21	Release

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1 Introduction

MedWin is an Integrated Development Environment that combines project management, source code editing, and program debugging in one single, powerful environment. It provides a most convenient way for debugging the ATT702X products. This user manual explains the steps needed to use MedWin.

2 Features

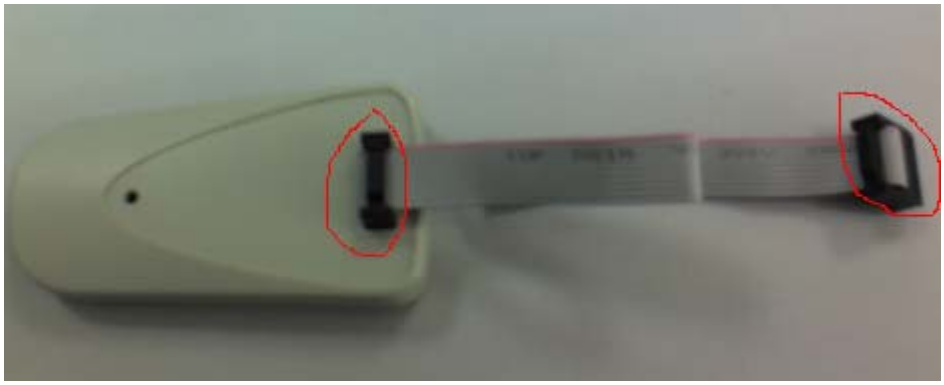
- Two breakpoints
- Communication through USB-Serial Port device
- Connect an extern power supply to ATT702X

3 Software and Related documentations

- MedWinV3 software
- ATT702X driver
- USB to Serial driver
- Medwin_manual. pdf
- ATT702x development tool’s user manual (downloaded from the ATT702x web site at www.hitrendtech.com)

4 Overview

5 USB-Serial Port Device



The red line represents pin 1, all the pins are configured as the chart below:

1	RX0	VCC	2
3	GND	/RST	4
5	TX0	TMS1	6
7	Undefined	Undefined	8
9	Undefined	Undefined	10

The switch should be turned to right, in other words the narrower side.

6 Software Installation

The file “MedwinV3 software and related documentations . rar” includes 3 folders described as below:

1) the installation file of MedWinV3
2) ATT702x Driver
3) USB-Serial Driver

To install the MedWinV3 software for ATT702x:

(1) Double click “setup.exe” in “MedWinV3” folder. The setup program guides you through installation process. Follow the setup instructions on the screen. On completion of the setup program execution, the MedWinV3.0 program icons are created in the selected folder.

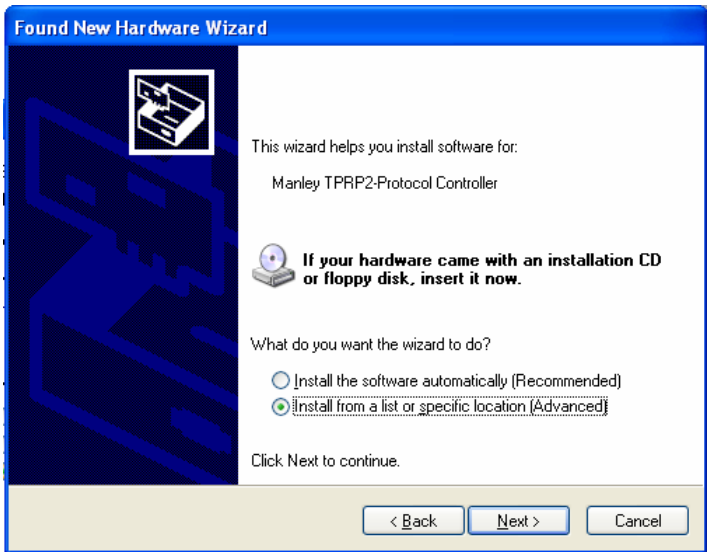
(2) Please copy all the files in “ATT702X_Driver” folder to the selected folder in process one (the folder user select to install MedWinV3).

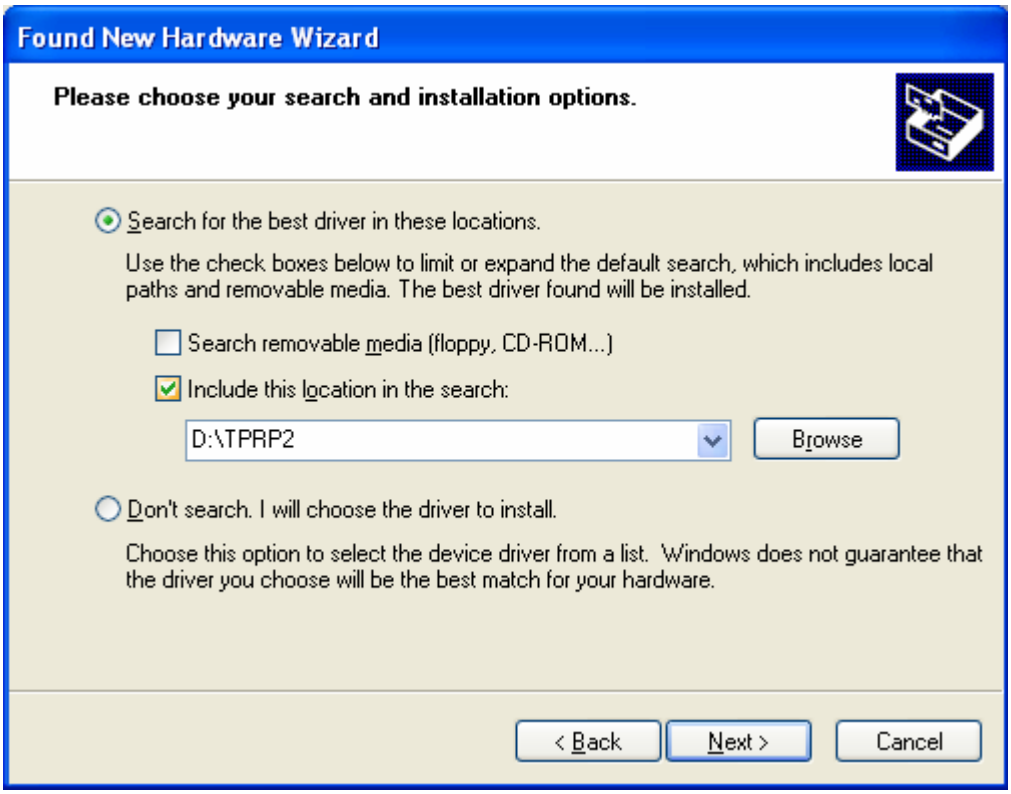
(3) To install USB-Serial driver:

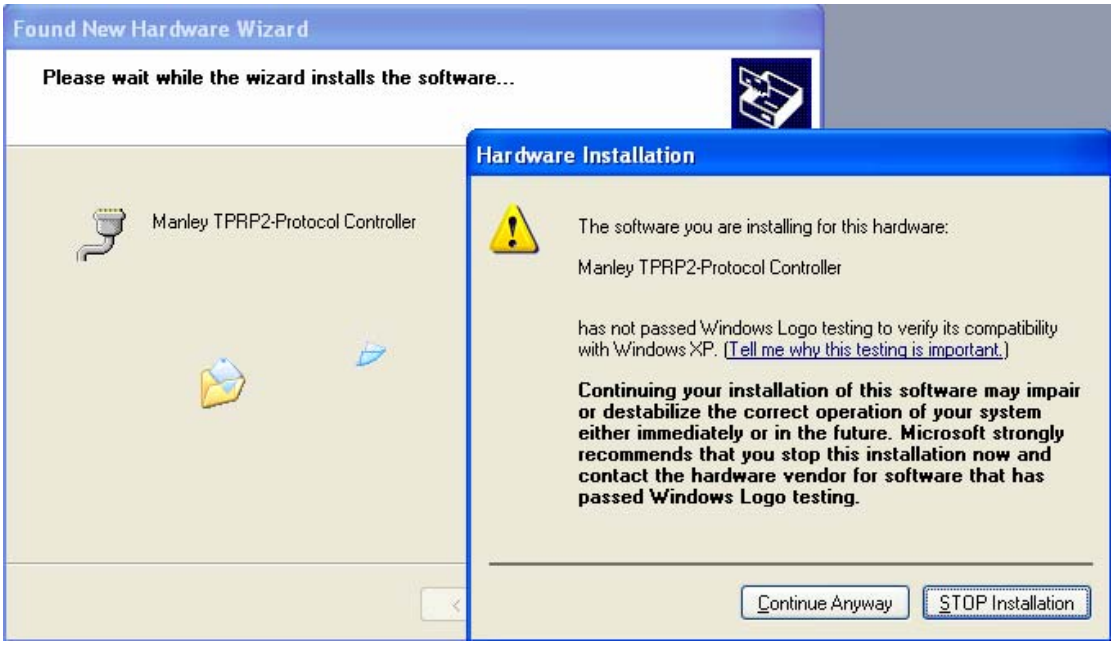
a) Connect the USB-Serial Port device to PC, there will be a “Found New Hardware” dialog on the screen, please select “ No, not this time ”

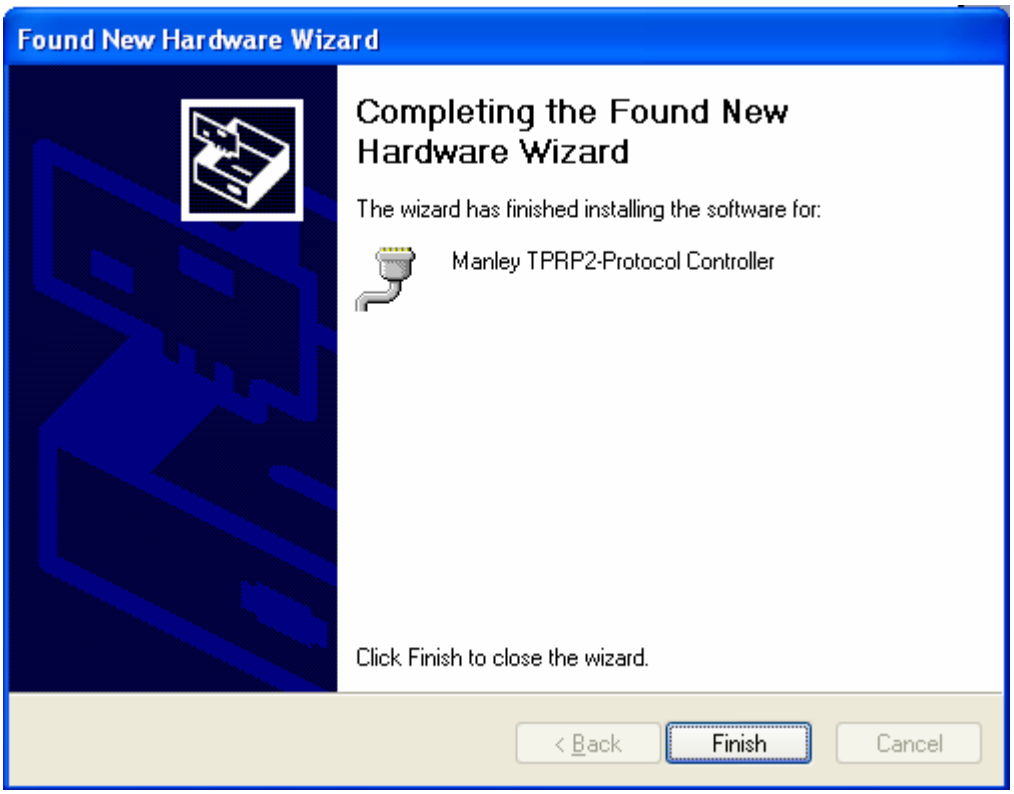
Found New Hardware Wizard
Welcome to the Found New Hardware Wizard
Windows will search for current and updated software by looking on your computer, on the hardware installation CD, or on the Windows Update Web site (with your permission).
Read our privacy policy
Can Windows connect to Windows Update to search for software?
Yes, this time only
Yes, now and every time I connect a device
No, not this time
Click Next to continue.
< Back
Next >
Cancel

b) Follow the wizard to finish the installation process:


Found New Hardware Wizard
This wizard helps you install software for:
Manley TPRP2-Protocol Controller
If your hardware came with an installation CD or floppy disk, insert it now.
What do you want the wizard to do?
Install the software automatically (Recommended)
Install from a list or specific location (Advanced)
Click Next to continue.
< Back
Next >
Cancel


Found New Hardware Wizard
Please choose your search and installation options.
Search for the best driver in these locations.
Use the check boxes below to limit or expand the default search, which includes local paths and removable media. The best driver found will be installed.
Search removable media (floppy, CD-ROM...)
Include this location in the search:
D:\TPRP2
Browse
Don't search. I will choose the driver to install.
Choose this option to select the device driver from a list. Windows does not guarantee that the driver you choose will be the best match for your hardware.
< Back
Next >
Cancel

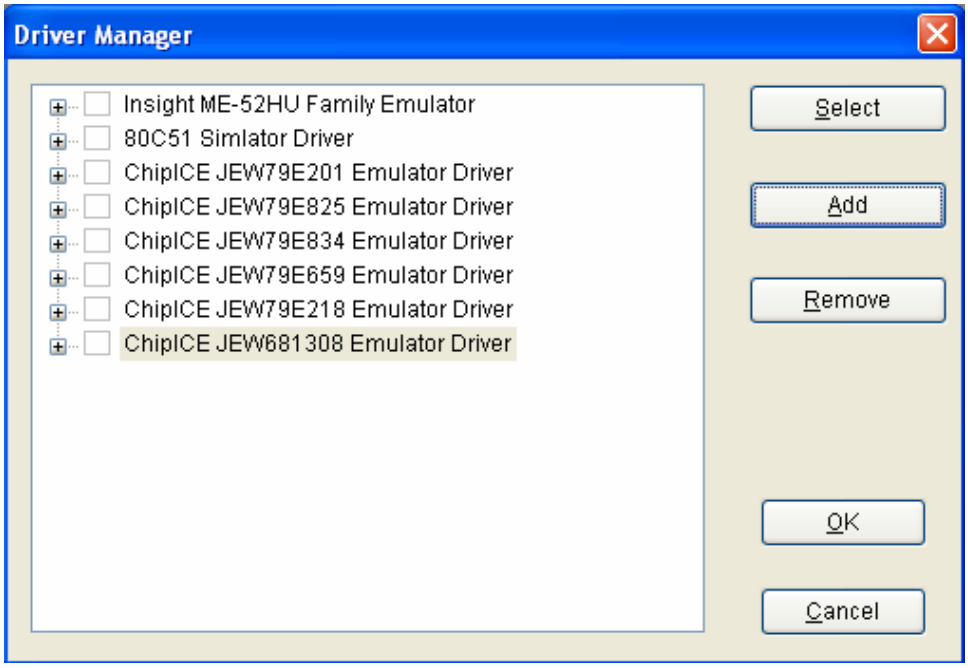

Found New Hardware Wizard
Please wait while the wizard installs the software...
Manley TPRP2-Protocol Controller
Hardware Installation
The software you are installing for this hardware:
Manley TPRP2-Protocol Controller
has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.)
Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.
Continue Anyway
STOP Installation

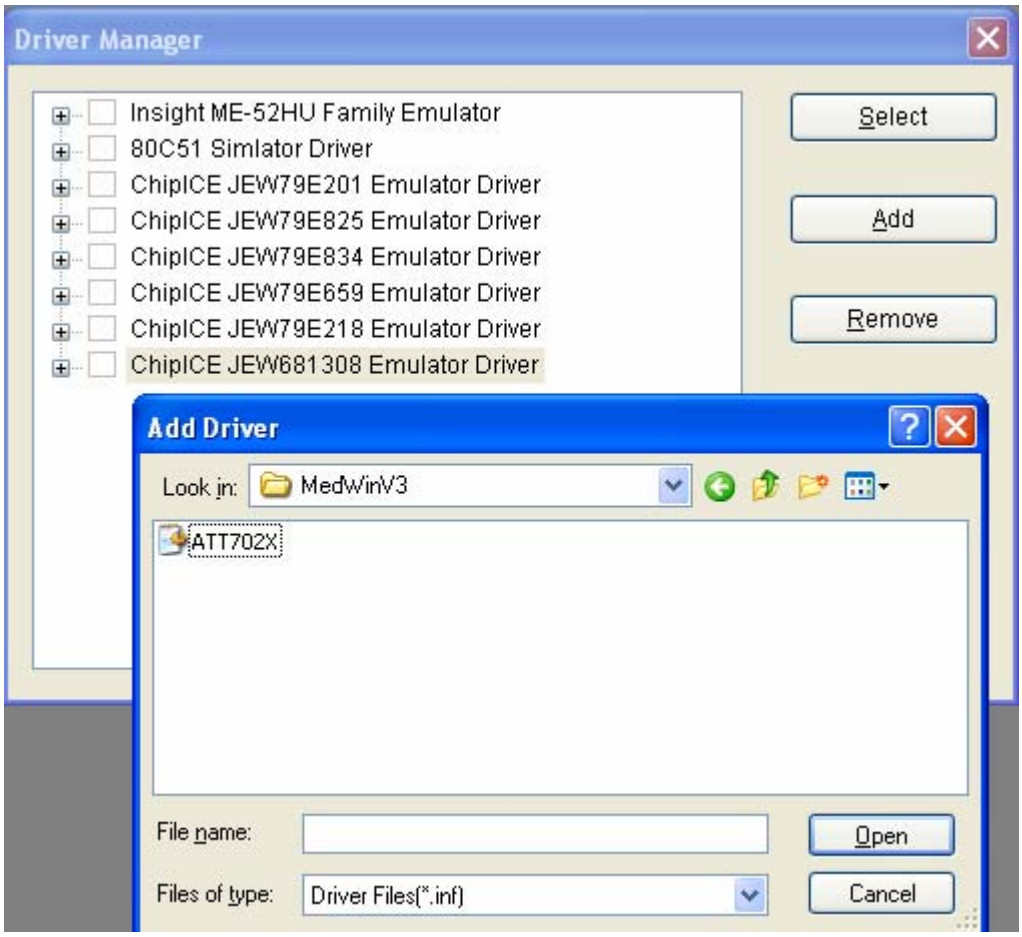


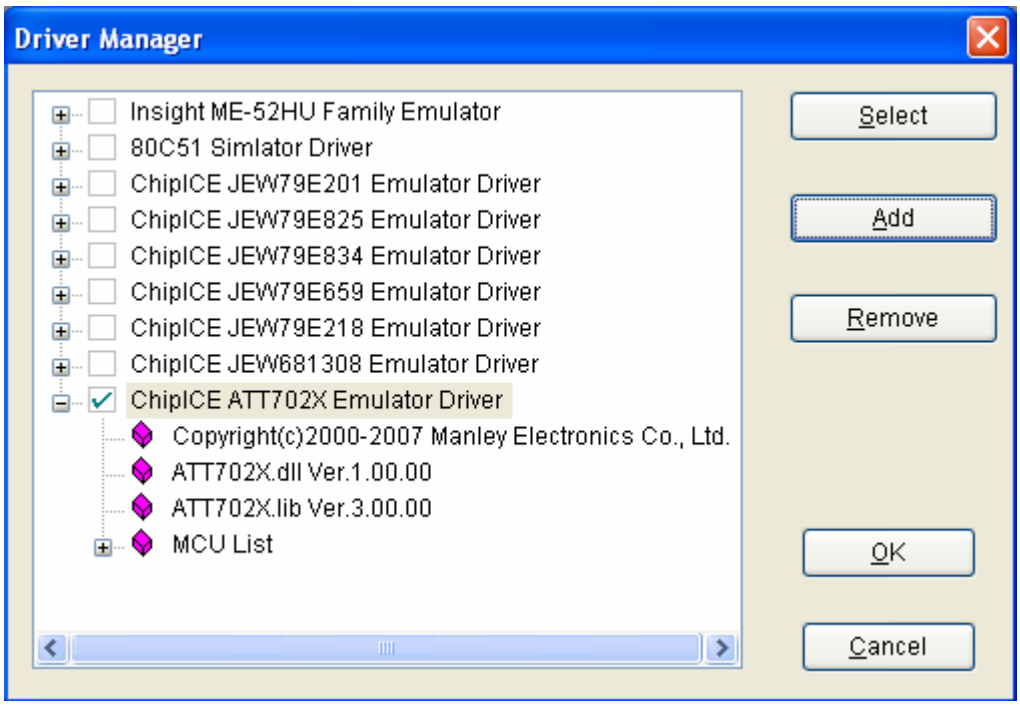
c) If you install this driver at the first time, maybe the operation system will remind you to install the driver again.

7 ATT702x driver and C compiler

(1) Add ATT702x driver to MedWinV3: “Settings” → “Driver Manager”

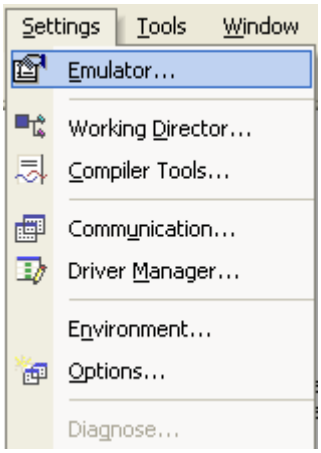


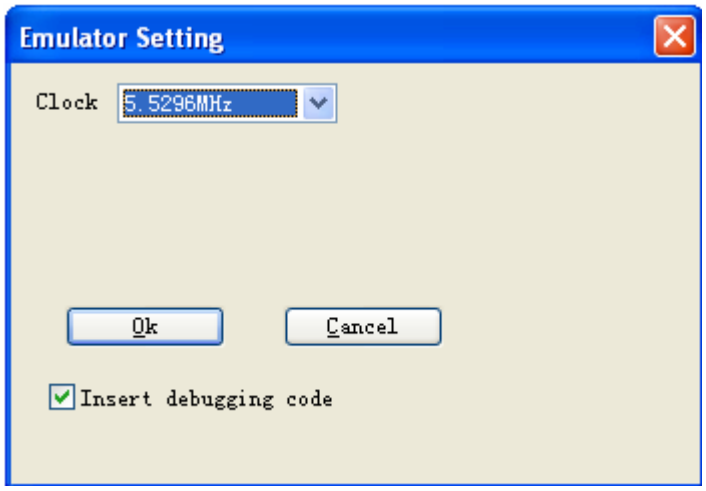

Driver Manager
Insight ME-52HU Family Emulator
80C51 Simlator Driver
ChipICE JEW79E201 Emulator Driver
ChipICE JEW79E825 Emulator Driver
ChipICE JEW79E834 Emulator Driver
ChipICE JEW79E659 Emulator Driver
ChipICE JEW79E218 Emulator Driver
ChipICE JEW681308 Emulator Driver
Select
Add
Remove
Add Driver
Look in:
MedWinV3
ATT702X
File name:
Open
Files of type:
Driver Files(*.inf)
Cancel


Driver Manager
Insight ME-52HU Family Emulator
80C51 Simlator Driver
ChipICE JEW79E201 Emulator Driver
ChipICE JEW79E825 Emulator Driver
ChipICE JEW79E834 Emulator Driver
ChipICE JEW79E659 Emulator Driver
ChipICE JEW79E218 Emulator Driver
ChipICE JEW681308 Emulator Driver
ChipICE ATT702X Emulator Driver
Copyright(c)2000-2007 Manley Electronics Co., Ltd.
ATT702X.dll Ver.1.00.00
ATT702X.lib Ver.3.00.00
MCU List
Select
Add
Remove
OK
Cancel

Please select “ChipICE ATT702X Emulator Driver” and click the button “OK”.

According to the crystal on target board, user should select the clock of development tool.

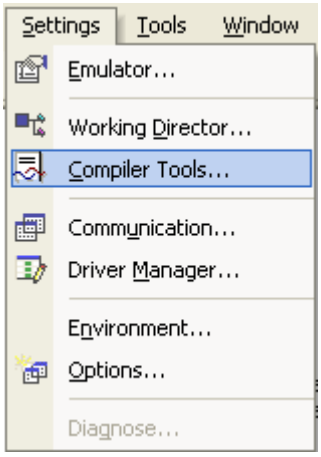




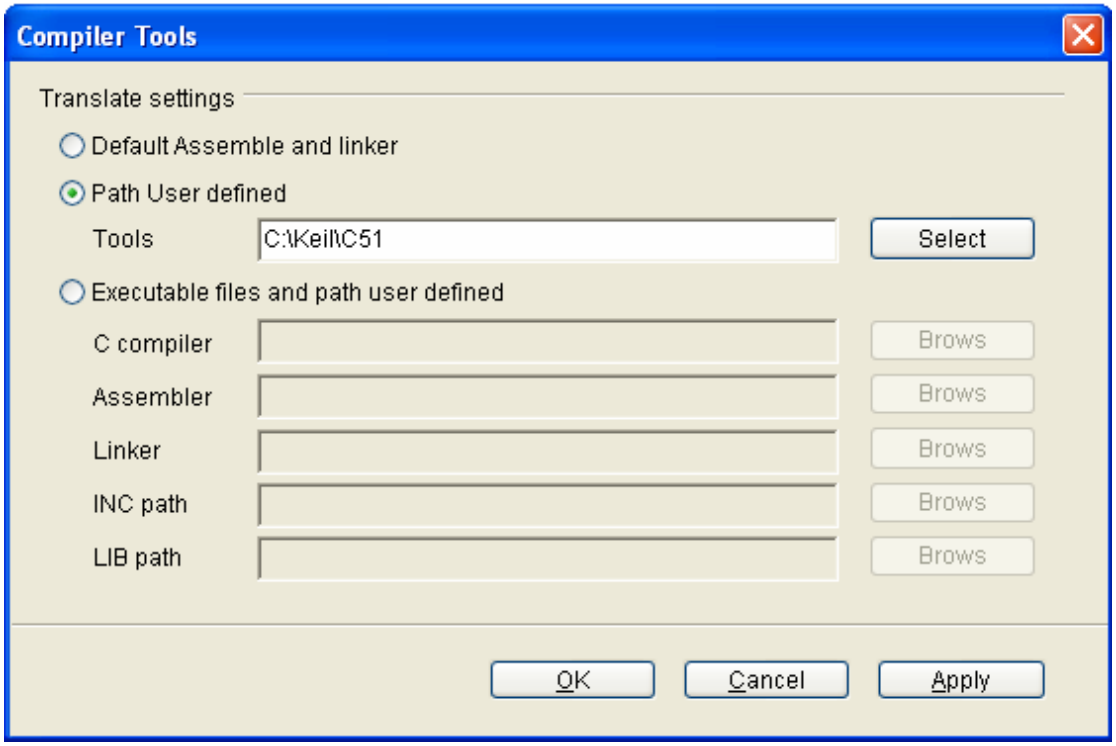
If all the operations are correct, the status will be shown at the bottom of MedWinV3:

If there are some problems, the status shown at the bottom of MedWinV3 will like this:

(2) Add C compiler to MedWinV3: “Settings” → “Compiler Tools”



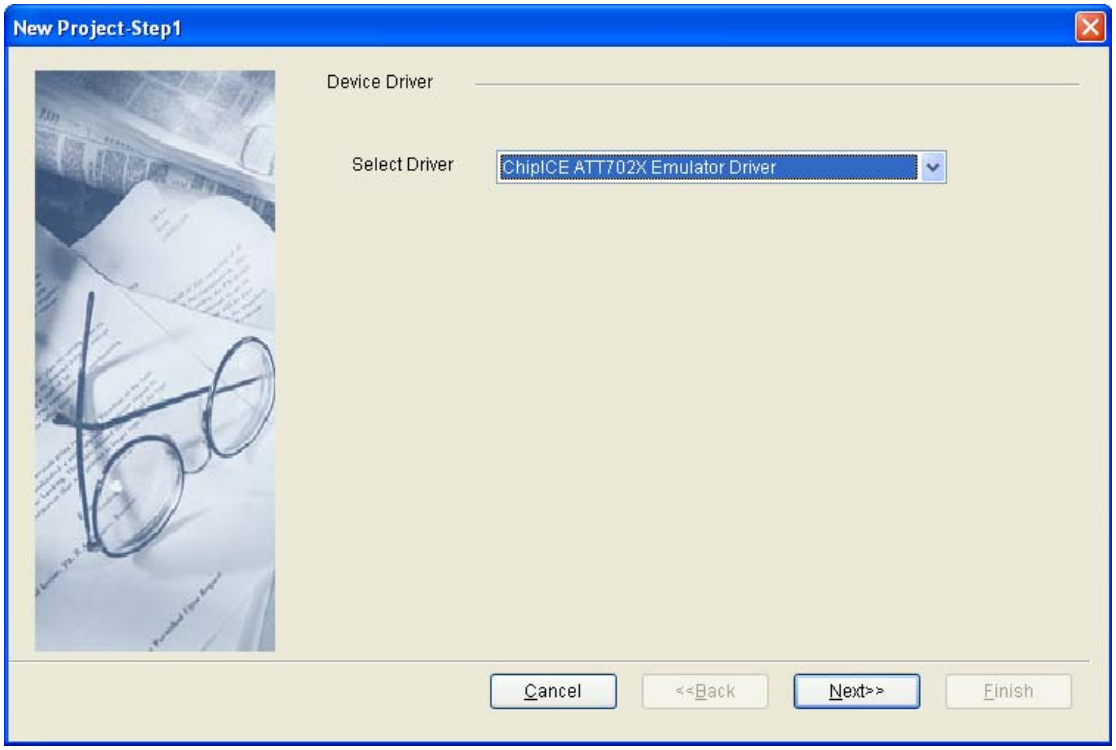
If user select Keil company ’s compiler, you should set path to folder that Keil was installed before. (You must ensure that you have installed Keil software in your PC)

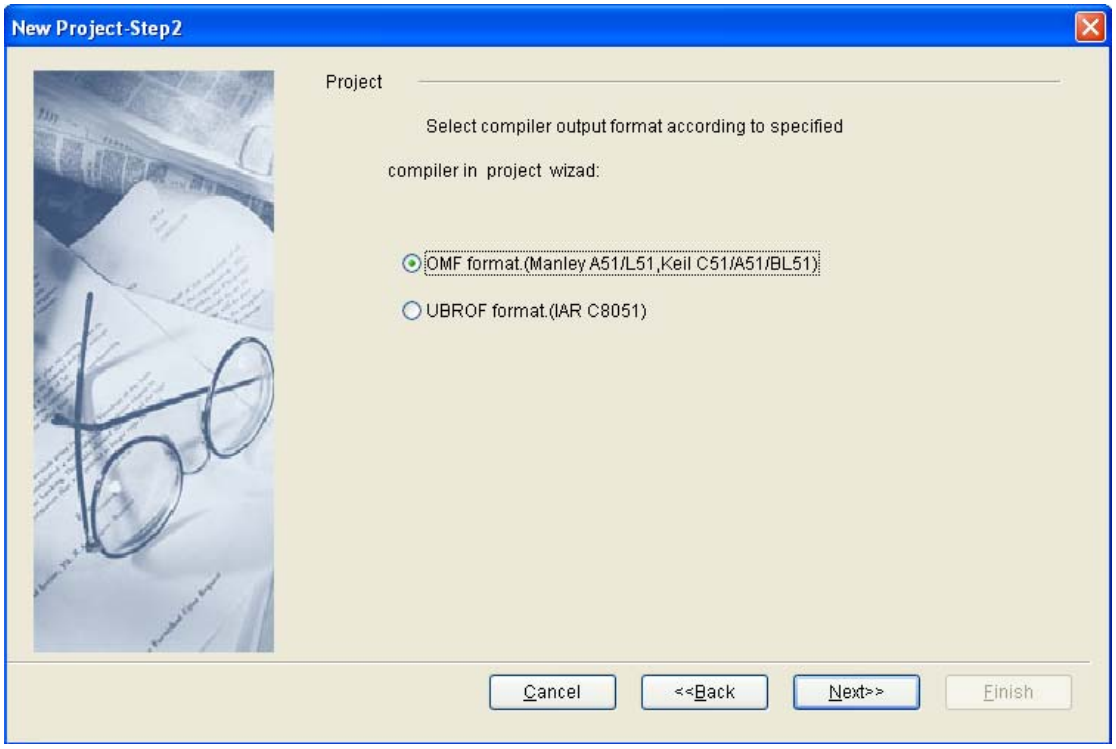


8 Creating a new project

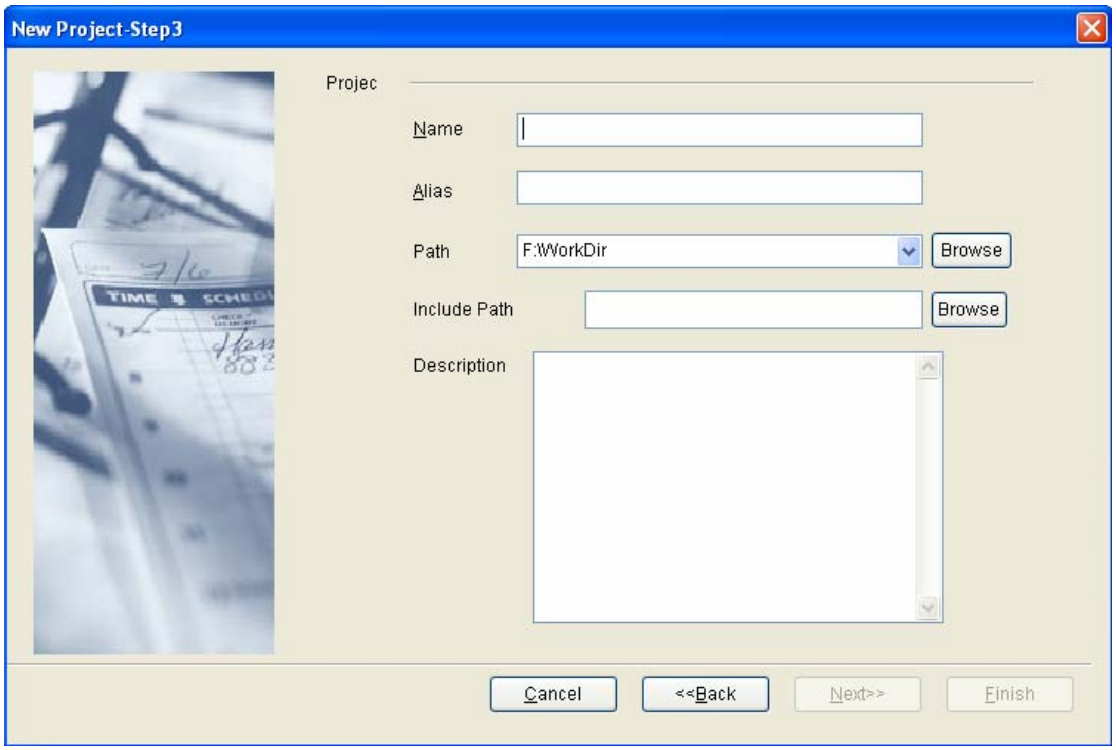
(1) Launch MedWinV3

(2) “Project” → “New Project” , please select driver “ChipICE ATT702x Emulator Driver”

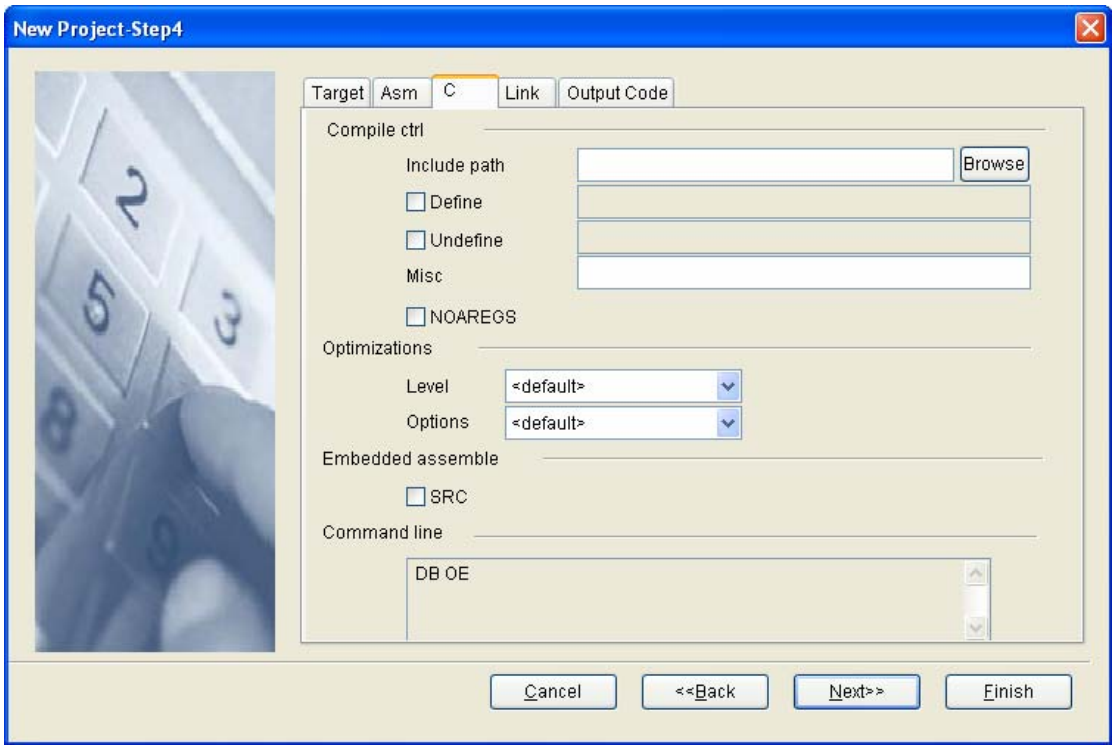




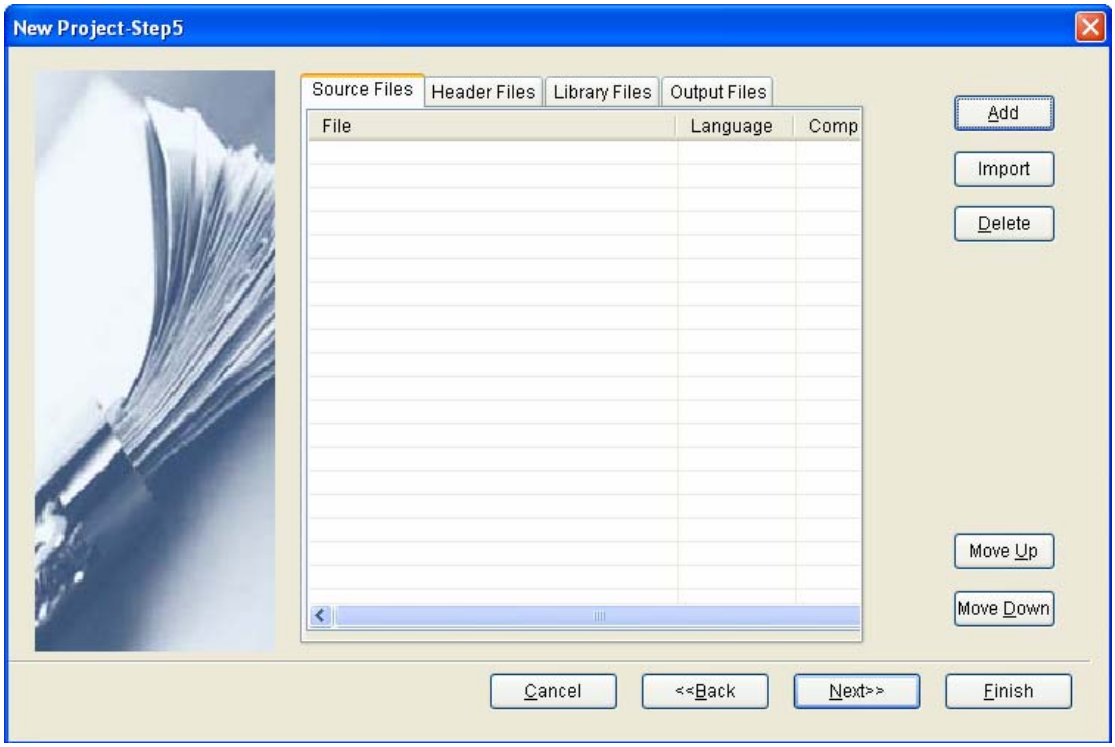
(3) In the project Name field, type the project name. In the location field, type or browse to the folder you created.



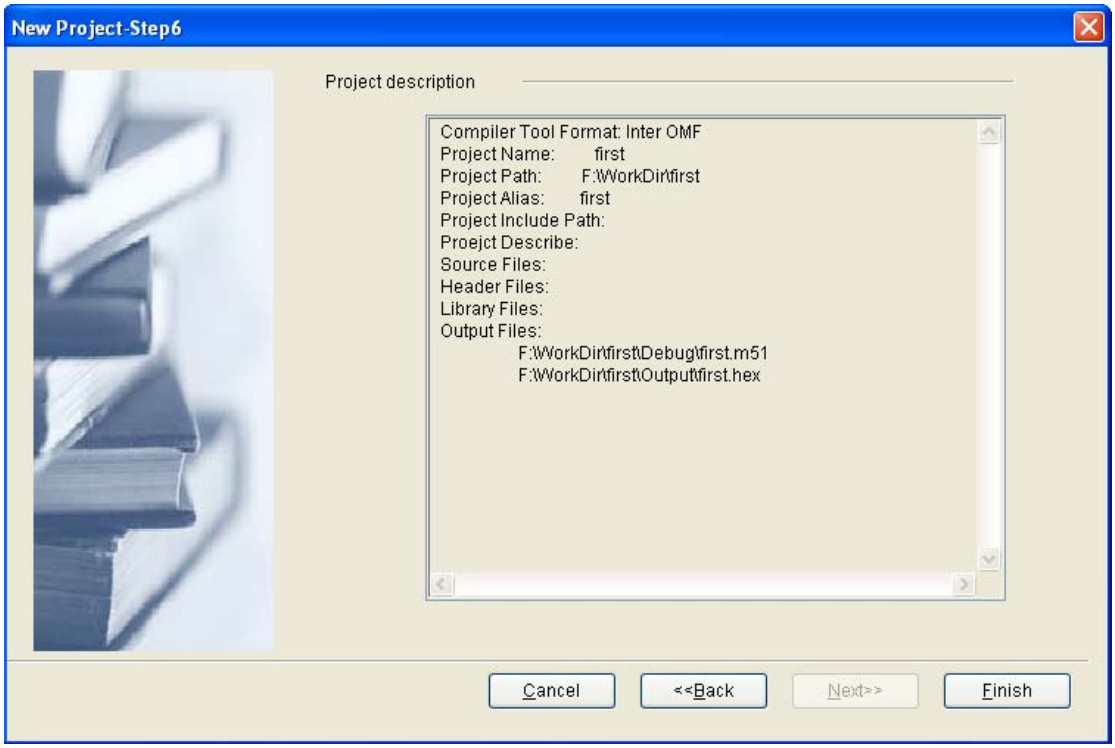
(4) Recommended Optimizations setting is “<default>”



(5) You can add the source files, library files or head files that have been created before in this dialog. If you don’t want to add any file, please click Next.

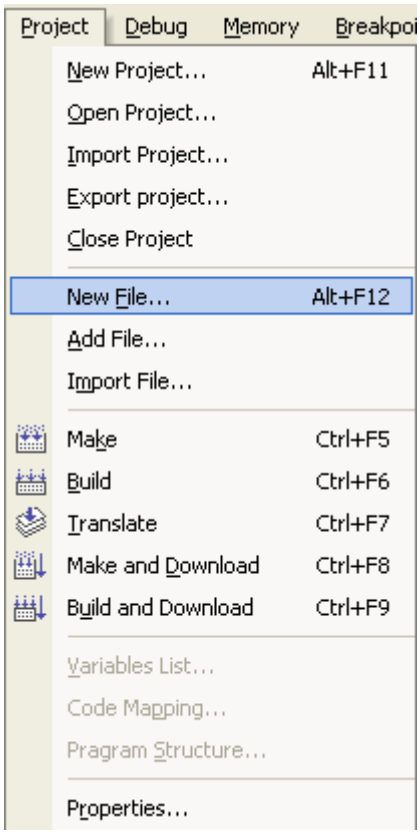


(6) Click Finish. MedWinV3 creates a project file.

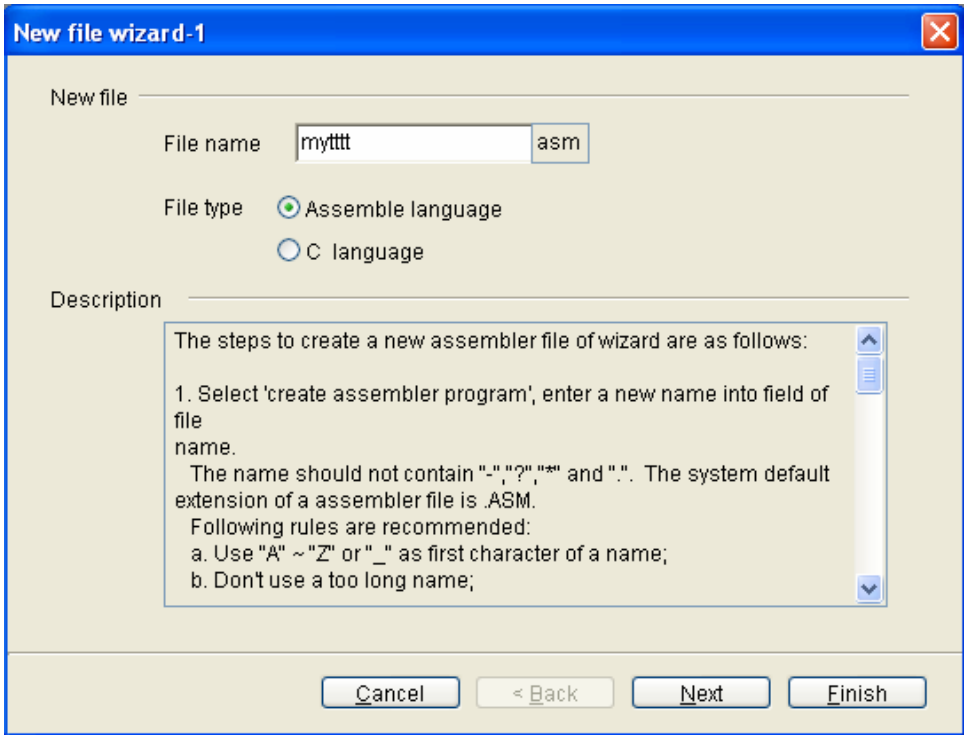


9 Creating a new file

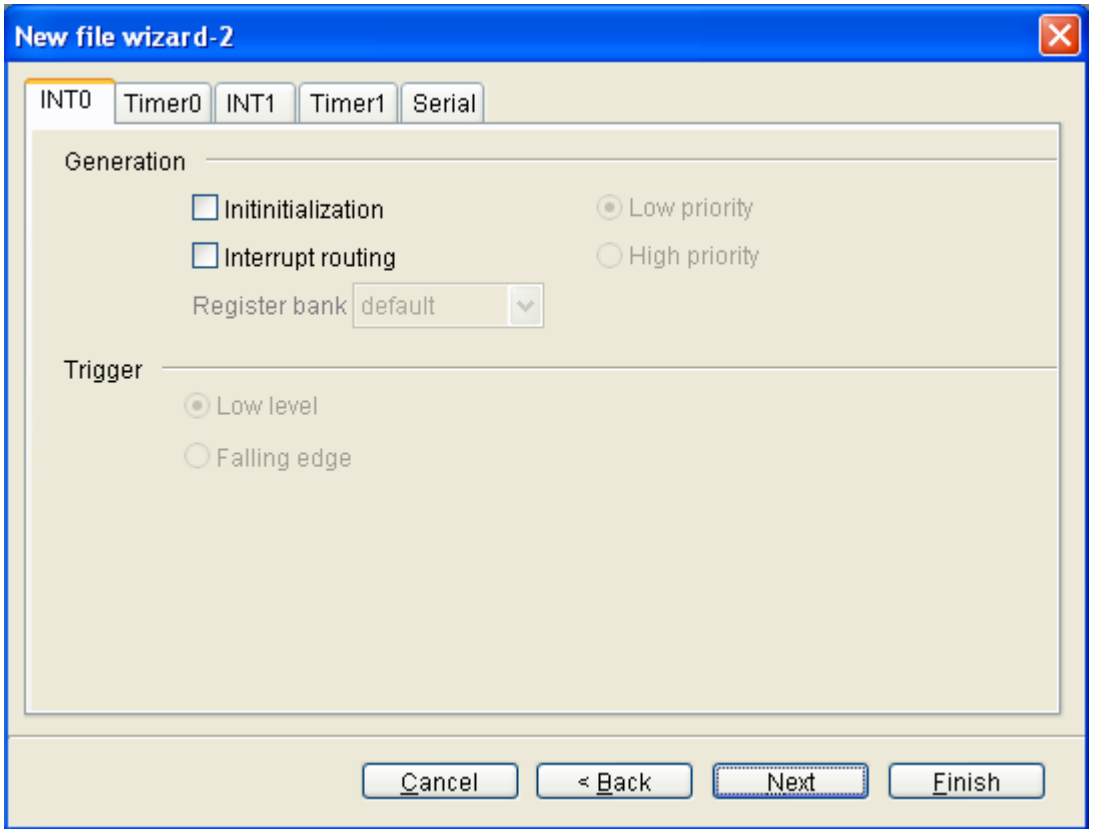
(1) “Project” → “New File”

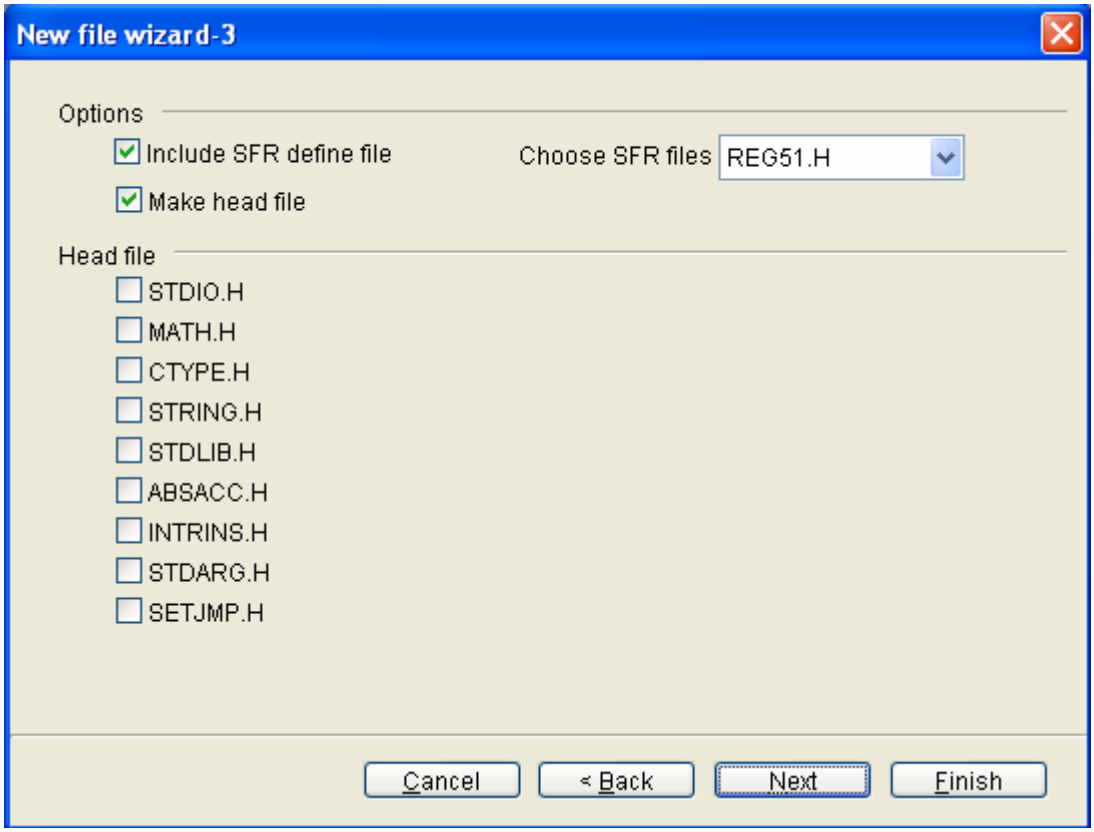


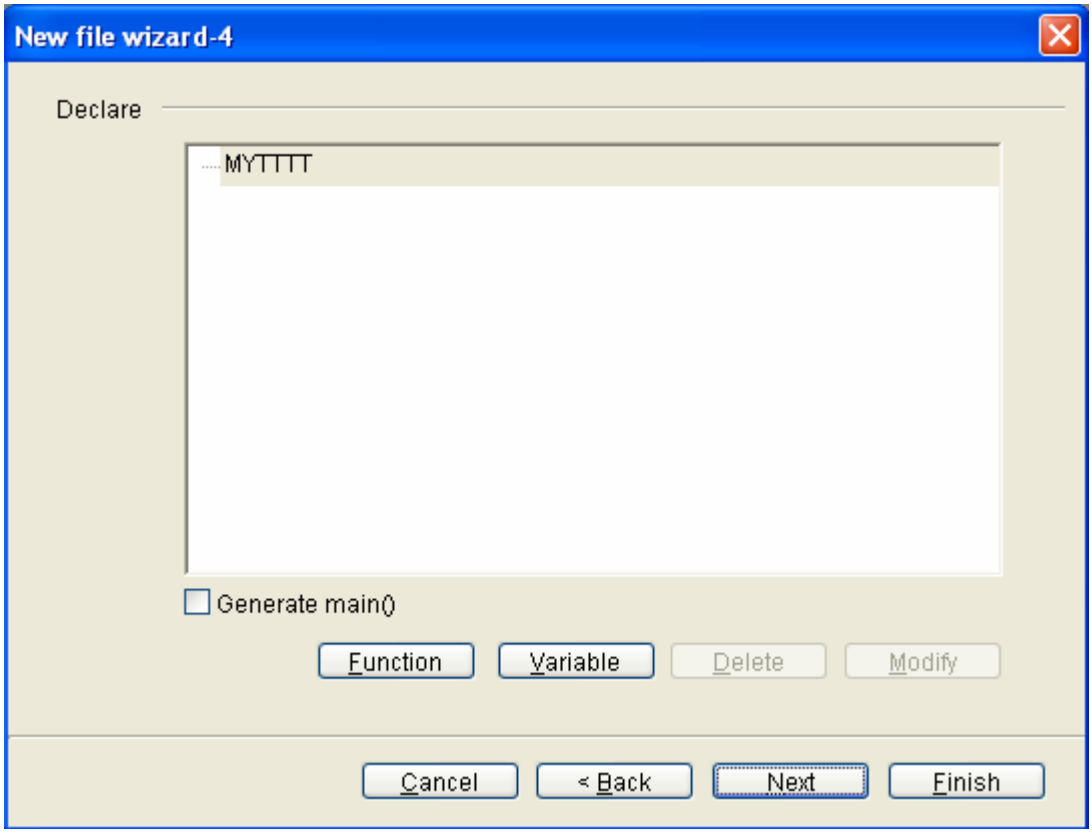
(2) Type the file name in the file name field and choose the file type you want to create.

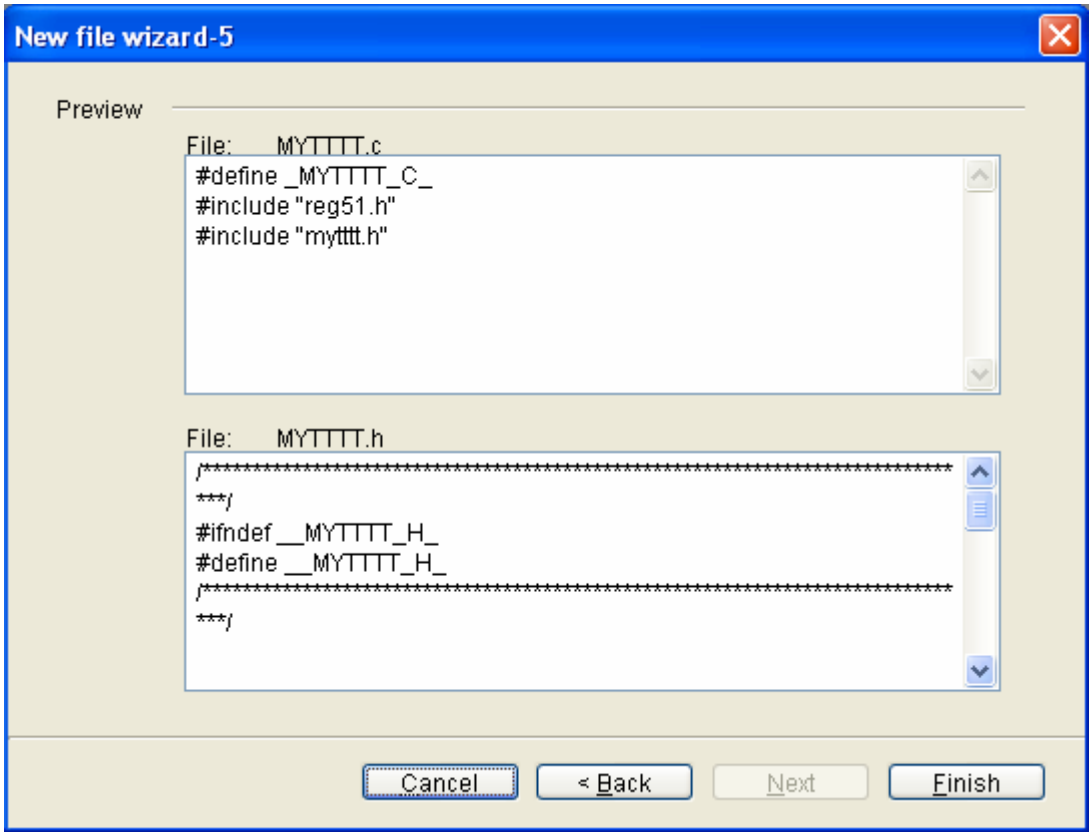

New file wizard-1
New file
File name
mytttt
asm
File type
Assemble language
C language
Description
The steps to create a new assembler file of wizard are as follows:
1. Select 'create assembler program', enter a new name into field of file
name.
The name should not contain "-","?","*" and ".". The system default extension of a assembler file is .ASM.
Following rules are recommended:
a. Use "A" ~"Z" or "_" as first character of a name;
b. Don't use a too long name;
Cancel
< Back
Next
Finish

(3) If a C language file will be created, the wizard will guide user as below:

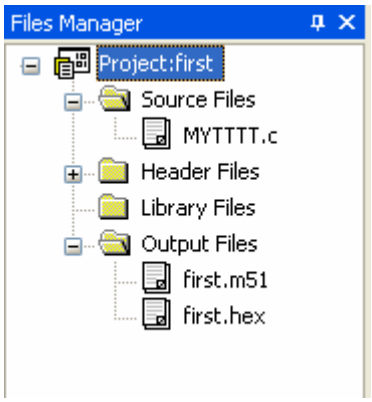





New file wizard-4
Declare
MYTTTT
Generate main()
Function
Variable
Delete
Modify
Cancel
< Back
Next
Finish


New file wizard-5
Preview
File: MYTTTT.c
#define _MYTTTT_C_
#include "reg51.h"
#include "mytttt.h"
File: MYTTTT.h
/*****
***/
#ifndef __MYTTTT_H_
#define __MYTTTT_H_
/*****
***/
Cancel
< Back
Next
Finish

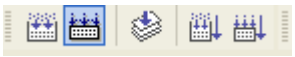
(4) Click finish and you will see the new file in Files Manager.



(5) If the status at the bottom of MedWinV3 is the same as the picture below, user can debug the file he or she created.

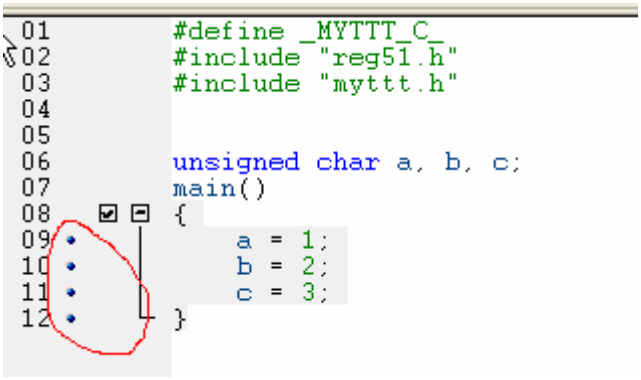
10 Building and Loading your program

(1) When you have created a functional program, you can build it. Use the “Project” → “Rebuild all” the first time you build the project. An output window will show the build process and status. When the build is finished, the output window will display “`<Compiler> C51 COMPILATION COMPLETE. 0 WARNING(S), 0 ERROR(S)`”



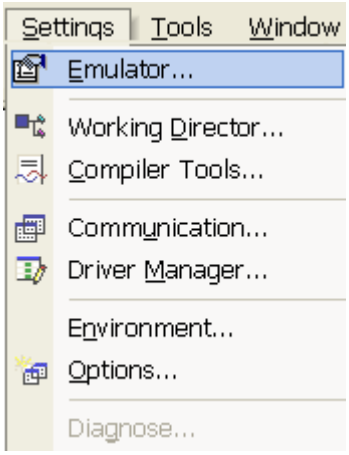
(2) If you want to debug your program, you can use the “Project” → “Make and Download”.

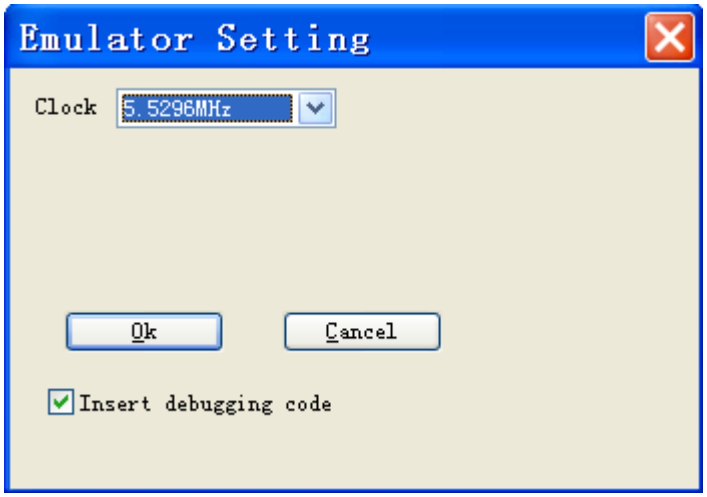
(3) The program in debugging mode will be like the picture below:



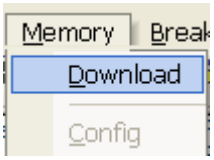
```
01      #define _MYTTT_C_
02      #include "reg51.h"
03      #include "myttt.h"
04
05
06      unsigned char a, b, c;
07      main()
08      {
09          a = 1;
10          b = 2;
11          c = 3;
12      }
```

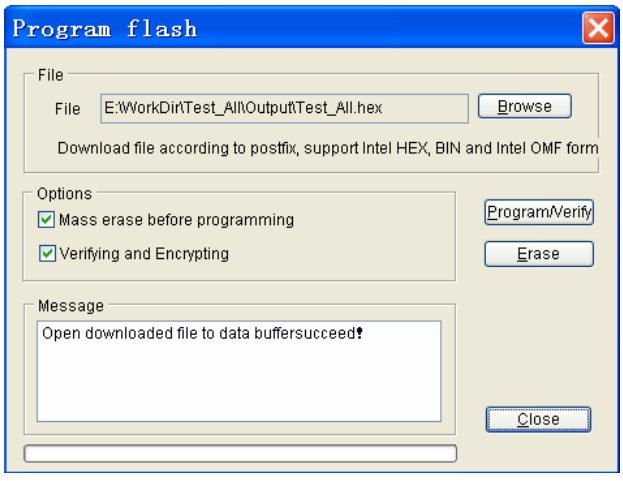
(4) If program is in debugging mode, the development tools inserts some debugging codes to corresponding hex files in output files. If user has finished debugging the program and want to create original hex file, please use “Settings”→ “Emulator”. The check box “Insert debugging code” decides whether to insert some codes for debugging to hex file.





(5) You can download your program to target board directly by using “memory” → “Download”.





11 Debugging Suggestions

(1) There are some restrictions when user is debugging the program.

1) Serial Port 0 and Time 2 can’t be configured. User can’t disable EA and Serial Port 0 interrupt. Watch Dog needs to be disabled.
2) The system must be 5.5296MHz or 11.0592MHz.
3) The SFR window in MedWinV3 can’t display written-protect registers correctly. User can get real values through indirect ways.
4) 32K flash can only be configured as code flash and user can’t program from 7C00H to 8000H.
5) When user is debugging the program, MCU always execute at high frequency mode.
6) Two breakpoints can’t be set adjacently.
7) If user has finished executing “memory” → “download” → “Program/Verify”, please don’t close the “Program flash” window at once. You should remove USB-Serial Port at first otherwise the program download before will be erased.

12 C code debugging suggestions

It is not recommended to set the breakpoint at the end of subroutine or interrupt routine.

13 ASM debugging suggestions

Program execution may stop on wrong address when the following situations happen at the same time.

(1) User sets breakpoints at the end of subroutine or interrupt routine.

(2) The instruction under break address is the entrance address of a function.

(3) The PC is under the break address and user execute “RUN”.

The picture below is a example:

```
13
14 •            INC     A
15 ⚠            INC     A
16 •  CCC:      INC     A
17 •            INC     A
18 •            INC     A
19 •            NOP
20 •            NOP
21 •            NOP
22 •            NOP
23 ➪            NOP
24 •            NOP
25 •            NOP
26 •            NOP
27 •            AJMP    CCC
```